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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Shin Aoki

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EXAMINER

HENN, TIMOTHY J

ART UNIT

PAPER NUMBER

2622

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/630,824	Applicant(s) AOKI ET AL.	
	Examiner Timothy J. Henn	Art Unit 2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-3, 9, 12-24, 26-30, 35 and 38-51 is/are allowed.
- 6) ☒ Claim(s) 4-8, 10, 11, 25, 31-34, 36 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4-8, 10, 11, 31-34, 36 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

[claim 4]

Claim 4 recites color image data which is in an RGB format in step a). However, step a) only recites laying out pixels and does not include any "color image data". The color image data is sampled in step b). It is unclear whether the "color image data" of claim 3 is different from the color image data sampled in step b) or if they are the same.

[claims 5 and 6]

Claim 5 recites the use of a first predetermined matrix for converting the color image data in step a) of claim 1. However, step a) only recites laying out pixels and does not include any "color image data". The color image data is sampled in step b). Therefore, it is unclear whether claim 4 as written requires conversion of different color image data than the color image data sampled in step b) or if the use of the first

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predetermined matrix for converting color image data is applied after step b). Claim 6 is also rejected for its dependence on claim 5.

[claims 7, 10 and 11]

Claim 7 recites the use of a second predetermined matrix for converting the RGB data to chroma values in step d). However, the conversion to chroma values is performed in step c). It is unclear whether claim 7 is meant to define the conversion of step c) or if a new conversion is to be performed in step d). Claims 10 and 11 are also rejected for their dependence on claim 7.

[claim 8]

Claim 8 recites combining the first and second matrices into a third matrix for replacing steps a), b) and c). However, steps a) and b) recite laying out pixels and sampling of color image data. It is unclear how these steps can be replaced by a matrix as claimed. Also see claims 4 and 7 above.

[claims 31 and 32]

Claim 31 recites the use of a first predetermined matrix for converting the color image data in step a) of claim 27. However, step a) only recites laying out pixels and does not include any "color image data". The color image data is sampled in step b). Therefore, it is unclear whether claim 31 as written requires conversion of different color image data than the color image data sampled in step b) or if the use of the first predetermined matrix for converting color image data is applied after step b). Claim 32 is also rejected for its dependence on claim 31.

[claims 33, 36 and 37]

Claim 33 recites the use of a second predetermined matrix for converting the RGB data to chroma values in step d). However, the conversion to chroma values is performed in step c). It is unclear whether claim 33 is meant to define the conversion of step c) or if a new conversion is to be performed in step d). Claims 36 and 37 are also rejected for their dependence on claim 33.

[claim 34]

Claim 34 recites combining the first and second matrices into a third matrix for replacing steps a), b) and c). However, steps a) and b) recite laying out pixels and sampling of color image data. It is unclear how these steps can be replaced by a matrix as claimed. Also see claims 31 and 33 above.

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claim 25 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

[claim 25]

Claim 25 has been amended to recite simultaneous generation, adjustment and smoothing of chroma values. While the specification may support simultaneous

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generation and adjustment of chroma values, the claim smoothing step appears to be performed separately (e.g. Figure 5 shows chroma value generation in step 130 followed by smoothing in separate step 140). Therefore, the amendments to claim 25 introduce new matter.

Allowable Subject Matter

6. Claims 1-3, 9, 12-24, 26-30, 35 and 38-51 are allowed.
7. Claims 3-8, 10, 11, 31-34, 36 and 37 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

[claims 1-51]

The prior art does not teach or fairly suggest generation and adjustment of luminance and chroma values as claimed. While it is known in the prior art to generate luminance and chroma values (e.g. YCrCb values), and to use matrix multiplication to processes to process image data and to convert the image data between color spaces, the specific system claimed is not taught or suggested.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 11-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on (571) 272-7593. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Timothy J Henn/
Primary Examiner, Art Unit 2622